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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,145	05/10/2005	David John Moody	056258-5079	2334

9629 7590 07/05/2005

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EXAMINER

TESKIN, FRED M

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/512,145

Applicant(s)

MOODY ET AL.

Examiner

Fred M. Teskin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-12, 14, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 6-8, 13, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>102204</u> . | 6) <input type="checkbox"/> Other: ____. |

The preliminary amendment of October 22, 2004, has been entered in full.

Claims 1-18 are currently pending and under examination.

The references cited in the Search Report of August 18, 2003 have been considered; however, the "X" category article authored by Hiratani et al is not being applied at this time, as it is unclear on the present record whether the ethyleneglycol ether moieties of the monomers described therein contain endgroups that are in fact "acid-labile protecting groups" as claimed herein.

Claim 13 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. As amended, claim 13 refers to two sets of claims (9 and 2) to different features. See MPEP § 608.01(n), particularly section B.3. Accordingly, the claim has not been further treated on the merits.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 provides for the use of a polymer support according to claim 14 in solid phase synthesis, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass.

A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 18 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claims 10 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 10, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 17, the phrase "obtainable by the process ..." creates indefiniteness because virtually any variation in any parameter within the scope of the recited process would alter the polymer support produced. One who made or used a polymer support made by a process other than the process recited in parent claim 9 would have to produce polymers using all possible parameters within the scope of the claim (a practical impossibility) and then extensively test each product to determine if his polymer support was "obtainable" by a process within the scope of claims 17/9. A

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claim is indefinite if undue experimentation is involved to determine the boundaries of protection. *Ex parte Tanksley*, 26 UPPQ2d 1389. Amending claim 17 by replacing "obtainable" with –obtained- would obviate this ground of rejection.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 9-12, 14, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over W0 00/02953 ("Avecia"), alone or in view of the evidence provided by US 6459003 to Dasseux et al.

Avecia discloses *polymer supports* containing polyoxyalkylenes, which are said to be useful as supports in *solid phase synthesis* (page 1, lines 2-3 and 26-30).

Avecia teaches two alternative procedures for preparing the polymer supports; per the second (alternative) procedure, the polymer support is "prepared by polymerisation of a monomer comprising a hydroxy(polyC₂₋₄alkyleneoxy) moiety, preferably in which the free hydroxy of the hydroxy(polyC₂₋₄alkyleneoxy) moiety is protected with a suitable hydroxy protecting group, under conditions to produce crosslinking. In many such embodiments, a styrene monomer substituted on the phenyl moiety, preferably at the 4-position, by an optionally protected hydroxy(polyC₂₋₄alkyleneoxy) moiety, is polymerised in the presence of a cross-linking monomer. For

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example, a polymer support ... can alternatively be prepared by polymerizing styrene and 4-(optionally protected)-hydroxy(polyC₂₋₄alkyleneoxy)styrene together with the appropriate crosslinking monomer.” (Avecia, page 5, lines 21-33; italics added.)

Crosslinking and styrene monomers within claims 10-11 are taught at, e.g.; page 3, line 23 to page 4, line 2.

Avecia is deficient only in failing to disclose a monomer comprising a hydroxy(polyC₂₋₄alkyleneoxy) chain protected with an acid labile protecting group in a single embodiment.

However, as to the hydroxyl-protecting group, Avecia enumerates suitable hydroxy protecting groups at page 3, lines 3-9. One of the listed groups, the tetrahydropyranyl group, is subsequently cited as an example of a hydroxy-protecting group that “may be removed with p-toluene sulfonic acid” (see page 6, lines 20-22), thus indicating an acid labile character.

Moreover, evidence provided by Dasseux et al confirms that virtually all of the hydroxy-protecting groups cited in Avecia are recognized in the prior art as base-stable, *acid-labile* hydroxyl-protecting groups. Cf., examples of such groups given in column 80, lines 25 *et seq.* of Dasseux et al with those listed on page 3, lines 3-9 of Avecia.

In view of this evidence, it is concluded that those of ordinary skill would have recognized the hydroxyl protecting groups disclosed in Avecia to be acid labile, and, further, would have been led to select one of those groups, e.g, tetrahydropyranyl, to protect the hydroxy(polyC₂₋₄alkyleneoxy) moiety of a substituted styrene monomer,

given the teaching in Avecia of the alternative use of such a hydroxyl-protected monomer to prepare its polymer support.

Accordingly, the subject matter of claims 1-5, 9-12, 14, 17 and 18 would have obvious to one having ordinary skill in the art at the time of applicant's invention.

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Grosjean is pertinent in its disclosure of polyamides with pendant polyoxyalkylene chains. Yokota et al is pertinent in its disclosure of surfactant compounds having a polymerizable moiety as well as a polyoxyalkylene ether chain.

Claims 6-8, 15 and 16 are objected to as being dependent on a rejected base claim but would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claim.

The following is a statement of reasons for the indication of allowable subject matter: A monomer or polymer support having an acid labile protecting group as specified in claims 6-8 and 15-16 is not found in the prior art within the meaning of 35 U.S.C. 102 or 103.

Any inquiry concerning this communication should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be


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reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMTeskin/06-24-05



FRED TESKIN
PRIMARY EXAMINER
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